Datasheet for ABIN3135281

NR1D2 Protein (AA 1-576) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	NR1D2
Protein Characteristics:	AA 1-576
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This NR1D2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Brand:	AliCE®
Sequence:	MELNAGGVIA YISSSSSASS PASCHSEGSE NSFQSSSSSV PSSPNSSNCD ANGNPKNADI SSIDGVLKSD RTDCPVKTGK TSAPGMTKSH SGMTKFSGMV LLCKVCGDVA SGFHYGVHAC EGCKGFFRRS IQQNIQYKKC LKNENCSIMR MNRNRCQQCR FKKCLSVGMS RDAVRFGRIP KREKQRMLIE MQSAMKTMMN TQFSGHLQND TLAEQHDQSA LPAQEQLRPK SQLEQENIKN TPSDFAKEEV IGMVTRAHKD TFLYNQEHRE NSSESMPPQR GERIPRNMEQ YNLNQDHRGS GIHNHFPCSE RQQHLSGQYK GRNIMHYPNG HAVCIANGHC MNFSSAYTQR VCDRIPVGGC SQTENRNSYL CNTGGRMHLV CPMSKSPYVD PQKSGHEIWE EFSMSFTPAV KEVVEFAKRI PGFRDLSQHD QVNLLKAGTF EVLMVRFASL FDAKERTVTF LSGKKYSVDD LHSMGAGDLL SSMFEFSEKL NALQLSDEEM SLFTAVVLVS ADRSGIENVN SVEALQETLI RALRTLIMKN HPNEASIFTK LLLKLPDLRS LNNMHSEELL AFKVHP **Sequence without tag. The proposed Strep-Tag is based on experience s with the expression**

	system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.
Characteristics:	Key Benefits: • Made in Germany - from design to production - by highly experienced protein experts. • Protein expressed with ALiCE® and purified in one-step affinity chromatography • These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed). • State-of-the-art algorithm used for plasmid design (Gene synthesis). This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein. The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified. Expression System: • ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications. • During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein! Concentration: • The concentration of our recombinant proteins is measured using the absorbance at 280nm. • The protein's absorbance will be measured against its specific reference buffer. • We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.
Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).
Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	NR1D2
Alternative Name:	Nr1d2 (NR1D2 Products)
Background:	Nuclear receptor subfamily 1 group D member 2 (Orphan nuclear receptor RVR) (Rev-erb-beta),FUNCTION: Transcriptional repressor which coordinates circadian rhythm and metabolic pathways in a heme-dependent manner. Integral component of the complex transcription machinery that governs circadian rhythmicity and forms a critical negative limb of the circadian clock by directly repressing the expression of core clock components BMAL1 and CLOCK. Also regulates genes involved in metabolic functions, including lipid metabolism and the inflammatory response. Acts as a receptor for heme which stimulates its interaction with the NCOR1/HDAC3 corepressor complex, enhancing transcriptional repression. Recognizes two classes of DNA response elements within the promoter of its target genes and can bind to DNA as either monomers or homodimers, depending on the nature of the response element. Binds as a monomer to a response element composed of the consensus half-site motif 5'-[A/G]GGTCA-3' preceded by an A/T-rich 5' sequence (RevRE), or as a homodimer to a direct repeat of the core motif spaced by two nuclegotides (RevDR-2). Acts as a potent competitive repressor of ROR alpha (RORA) function and also negatively regulates the expression of NR1D1. Regulates lipid and energy homeostasis in the skeletal muscle via repression of genes involved in lipid metabolism and myogenesis including: CD36, FABP3, FABP4, UCP3, SCD1 and MSTN. Regulates hepatic lipid metabolism via the repression of APOC3. Represses gene expression at a distance in macrophages by inhibiting the transcription of enhancer-derived RNAs (eRNAs). In addition to its activity as a repressor, can also act as a transcriptional activator. Acts as a transcriptional activator of the sterol regulatory element-binding protein 1 (SREBF1) and the inflammatory mediator interleukin-6 (IL6) in the skeletal muscle. Plays a role in the regulation of circadian sleep/wake cycle, essential for maintaining wakefulness during the dark phase or active period (PubMed:29355503). Key regulator of skeletal muscle mitochondrial function, negatively regulates the skeletal muscle expression of core clock genes and genes involved in mitochondrial biogenesis, fatty acid beta-oxidation and lipid metabolism (PubMed:29723273). May play a role in the circadian control of neutrophilic inflammation in the lung (PubMed:29533925). {ECO:0000269|PubMed:15623503, ECO:0000269|PubMed:18454201, ECO:0000269|PubMed:19682428, ECO:0000269|PubMed:22474260, ECO:0000269|PubMed:23221024, ECO:0000269|PubMed:23728303, ECO:0000269|PubMed:29355503, ECO:0000269|PubMed:29533925, ECO:0000269|PubMed:29723273}.
Molecular Weight:	64.3 kDa

Target Details

UniProt:	Q60674
Pathways:	Nuclear Receptor Transcription Pathway, Steroid Hormone Mediated Signaling Pathway

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications. During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months